

REMARKS

Applicant respectfully requests reconsideration and allowance of the subject application. Claim 28 has been canceled. Claims 1-27 and 29-58 are pending, of which claims 1, 10-13, 19-21, 24, 29-30, 35, 39-40, 46, and 48-58 have been amended.

Teleconference with Examiner

Applicant appreciates the Examiner's time for our teleconference on March 28, 2007, and the Examiner's efforts to clarify pending issues to advance prosecution of the subject application. Independent claim 1 was discussed with respect to the Li and Hoppe references, as well as features described in the specification of the subject application.

Examiner Channavajjala was helpful with recommendations for possible claim language and specification features to consider for incorporation into the independent claims. Accordingly, the claims have been amended to clarify and/or incorporate claim language in an effort to place the claims in condition for allowance over the Li, Hoppe, and Jain references. However, the Examiner reserved the right to further evaluate the references of record and/or conduct a further search for any additional references.

35 U.S.C. §101 Claim Rejections

Claims 1-58 are rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter (*Office Action* p.3). Specifically, the Office interprets independent claims 1, 12, 35, and 50 as being implemented by software that does

1 not have a practical application because a useful, tangible, and concrete result is
2 not produced. For example, the query result generated in claim 1 is not output,
3 stored, or displayed. The Office also rejects independent claim 50 for
4 non-statutory computer-readable media (*Office Action* p.8). Appropriate
5 amendments have been provided herein and Applicant requests that the §101
6 claim rejections be withdrawn.

7

35 U.S.C. §102 Claim Rejections

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9 **A.** Claim 1 is rejected under 35 U.S.C. §102(b) as being anticipated by
10 U.S. Patent No. 5,515,488 to Hoppe *et al.* (hereinafter, “Hoppe”) (*Office*
11 *Action* p.10).

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13 **B.** Claims 1-23 and 35-58 are rejected under 35 U.S.C. §102(b) as
being anticipated by U.S. Patent No. 5,911,138 to Li *et al.* (hereinafter, “Li”)
(*Office Action* p.11).

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15 **C.** Claims 24-34 are rejected under 35 U.S.C. §102(b) as being
anticipated by U.S. Patent No. 5,913,205 to Jain *et al.* (hereinafter, “Jain”) (*Office*
16 *Action* p.18). Applicant respectfully traverses the rejection.

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19 The Hoppe and Li references are both directed to showing the results of a
20 query that has been input via text. For example, Hoppe describes a query input
21 area (402) shown in Fig. 4 to enter a query expression. Only after a query
22 expression is entered and executed are the results then displayed (*Hoppe* col.10,
23 lines 27-54). Similarly, Li describes that a query statement is typed in (*Li* col.5,

1 line 61), the query statement is run, and then the results are displayed (*Li* col.5,
2 lines 47-67).

3 Contrary to Hoppe and Li, Applicant describes and claims a visual query
4 system in which a query expression can be developed from shapes that are query
5 criteria displayed on a user interface. Further, the proximate relationship of the
6 shapes to each other in the display define the logical connectors of the query
7 expression (*Specification ¶[0011]*; claim 1, for example). There is no indication in
8 either Hoppe or Li that a query expression is generated or developed from shapes
9 displayed on a user interface.

10
11 **Claim 1** recites a visual query system, comprising:

12 query criteria of a query expression displayed as shapes that have a
13 semantic relationship which represents logical associations between the
query criteria;

14 a user interface configured to display a query result of the query
15 expression; and

16 a query statement generator configured to:

17 determine Boolean associations corresponding to the
18 semantic relationship of the shapes;

19 generate a query statement for each shape of query criteria;

20 combine the query statements according to the Boolean
21 associations to generate the query expression; and

22 generate the query result of the combined query statements
23 that form the query expression.

1 As described above, neither Hoppe nor Li shows or discloses “query
2 criteria of a query expression displayed as shapes that have a semantic relationship
3 which represents logical associations between the query criteria”, as recited in
4 claim 1. Further, neither Hoppe nor Li shows or discloses that the query
5 expression can be generated from combined query statements generated for each
6 shape of query criteria, and from Boolean associations corresponding to the
7 semantic relationship of the shapes, as described in claim 1.

8 Hoppe only describes that a query expression is entered in a query input
9 area and then the results of the query are displayed in a query window (*Hoppe*
10 col.3, lines 35-46). Only after a query expression is entered and executed are the
11 results then displayed (*Hoppe* col.10, lines 27-54). Similarly, Li only describes
12 that a query statement is typed in (*Li* col.5, line 61), the query statement is run, and
13 the results are then displayed (*Li* col.5, lines 47-67).

14 The Office cites Li for a “query statement that corresponds to query criteria
15 is displayed along with semantic relationships that represent logical associations
16 between the query statements as detailed in Figs. 3A-3B” (*Office Action* p.11,
17 ¶12). Applicant disagrees because there is no indication in Li Figs. 3A-3B of
18 “query criteria of a query expression displayed as shapes”, as recited in claim 1.

19 The Office also cites Li Fig. 3A (query 1) and Fig. 3B (query 2) for
20 “generate a query statement of each shape of query criteria” (*Office Action* p.12,
21 ¶12). Neither of the text-based query 1 (Fig. 3A) or query 2 (Fig. 3B) in Li is
22 generated from shapes displayed as query criteria of a query expression. Further,
23 there is no indication in Li that a query expression is generated from query

1 statements and Boolean associations corresponding to semantic relationships of
2 displayed shapes, as described in claim 1.

3 Accordingly, claim 1 is allowable over both Hoppe and Li for at least the
4 reasons described above, and Applicant respectfully requests that the §102
5 rejection be withdrawn.

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7 **Claims 2-11** are allowable by virtue of their dependency upon claim 1.
8 Accordingly, claims 2-11 are allowable over Li and the §102 rejection should be
9 withdrawn. Additionally, some or all of claims 2-11 are allowable over Li for
10 independent reasons. For example:

11 Claims 4-7 and 10 recite a “visual query definition” that Li does not show
12 or disclose. For example, claim 4 recites that “a first shape of query criteria is
13 displayed proximate a second shape of query criteria within a visual query
14 definition such that the first shape has an AND Boolean association with the
15 second shape within the visual query definition”.

16 The Office cites to Li for a text query (104) shown in Fig. 3A as a visual
17 query definition (*Office Action* p.13, ¶15). However, the text query (104) in Li
18 does not include any shapes that are query criteria, such as recited in claim 4: “a
19 first shape of query criteria is displayed proximate a second shape of query criteria
20 within a visual query definition”.

21 Claim 5 recites “a visual query definition that is bordered to define a
22 Boolean association between the first shape and the second shape within the visual
23 query definition.” There is no indication in Li of a visual query definition that
24 includes shapes which are query criteria, or that a border of the visual query

1 definition defines a Boolean association between the shapes, as recited in claim 5.
2 The Office rejection of claim 5 does not address a visual query definition that is
3 bordered to define a Boolean association between shapes, and the rejection should
4 be withdrawn (*Office Action* p.13, ¶15). For example, the subject application
5 describes that a visual query definition can be bordered with a visual indication of
6 a Boolean association between shapes that are query criteria within the visual
7 query definition (*Specification* at least ¶[0023], ¶[0027]; Fig. 5, item 510).

8 Claim10 recites to “display the query result within the visual query
9 definition”. Li does not show or disclose a query result displayed within a visual
10 query definition, as recited in claim 10. The Office cites to Li for a query result
11 (105) shown in Fig. 3A. However, the query result (105) in Li is not displayed
12 within a visual query definition, as recited in claim 10.

13 Further, it is noted that the Office identifies element (104) in Fig. 3A of Li
14 as a “visual query definition” and as a basis to reject the recited feature in claims 4
15 and 5 (*Office Action* p.13, ¶15). Then the Office cites to element (105) in Fig. 3A
16 of Li as a “query result” and as a basis to reject the recited feature in claim 10
17 (*Office Action* p.15, ¶20). However, it is clear in Fig. 3A of Li that the “query
18 result” element (105) is not displayed within the “visual query definition” element
19 (104). Accordingly, Li does not show or disclose a query result displayed within a
20 visual query definition, as recited in claim 10.

21 Accordingly, claims 4-7 and 10 are allowable over Li for at least the
22 reasons described above and the §102 rejection should be withdrawn.

1 **Claims 12, 35, and 50** are independent claims that are also allowable over
2 Li for at least the reasons described above in response to the rejection of claim 1.
3 For example:

4 **Claim 12** recites “a visual query definition displayed to associate query
5 criteria of a query expression, the query criteria displayed as shapes within the
6 visual query definition such that proximate positions of the query criteria define
7 query criteria associations”. Li does not show or disclose any such visual query
8 definition, or that query criteria of a query expression are displayed as shapes.

9 **Claim 35** recites “displaying query criteria of a query expression as shapes
10 on a user interface”. Li does not show or disclose that query criteria of a query
11 expression are displayed as shapes on a user interface.

12 **Claim 50** recites “a visual query definition to associate query criteria of a
13 query expression, the query criteria displayed as shapes having display
14 relationships within the visual query definition”, and “a query result of the
15 combined query statements that form the query expression for display in the visual
16 query definition”. Li does not show or disclose any such visual query definition,
17 that query criteria are displayed as shapes within the visual query definition, or
18 that a query result is displayed in the visual query definition.”

19 Accordingly, independent claims 12, 35, and 50 are allowable over Li for at
20 least the reasons described above and the §102 rejection should be withdrawn.

21 **Claims 13-23** are allowable by virtue of their dependency upon claim 12.
22 Accordingly, claims 13-23 are allowable over Li and the §102 rejection should be
23 withdrawn. Additionally, some or all of claims 13-23 are allowable over Li for
24

1 independent reasons as described above in response to the rejection of claims 4-7
2 and 10.

3 **Claims 36-49** are allowable by virtue of their dependency upon claim 35.
4 Accordingly, claims 36-49 are allowable over Li and the §102 rejection should be
5 withdrawn. Additionally, some or all of claims 36-49 are allowable over Li for
6 independent reasons as described above in response to the rejection of claims 4-7
7 and 10.

8 **Claims 51-58** are allowable by virtue of their dependency upon claim 50.
9 Accordingly, claims 51-58 are allowable over Li and the §102 rejection should be
10 withdrawn. Additionally, some or all of claims 51-58 are allowable over Li for
11 independent reasons as described above in response to the rejection of claims 4-7
12 and 10.

13
14 **Claim 24** recites a user interface comprising “a visual query definition
15 displayed to associate the query criteria of a query expression, each of the query
16 criteria represented by a shape displayed within the visual query definition”, and
17 “a query result displayed within the visual query definition”.

18 Jain does not show or disclose any such visual query definition, that query
19 criteria of a query expression are represented by shapes displayed within the visual
20 query definition, or that a query result is displayed within the visual query
21 definition, as recited in claim 24. Jain only describes creating an image with a
22 bitmap editor for image analysis (*Jain* col.10, lines 49-67). Jain does not generate
23 a query expression from shapes displayed within a visual query definition as
24 described in claim 1.

1 Claim 24 also recites “a display attribute of the visual query definition that
2 defines a Boolean association of the query criteria represented by the shapes
3 displayed within the visual query definition”. Jain also does not show or disclose
4 any such display attribute of a visual query definition itself that defines a Boolean
5 association of the shapes that are the query criteria, as recited in claim 24. In fact,
6 Jain teaches away from a Boolean association being defined by a display attribute
7 of a visual query definition. Fig. 3 of Jain illustrates that Boolean search criteria
8 “AND” or “OR” must be selected for input when formulating a bitmap image for
9 comparison.

10 Accordingly, claim 24 is allowable over Jain for at least the reasons
11 described above and the §102 rejection should be withdrawn.

12 **Claims 25-34** are allowable by virtue of their dependency upon claim 24.
13 Accordingly, claims 25-34 are allowable over Jain and the §102 rejection should
14 be withdrawn. Additionally, some or all of claims 25-34 are allowable over Jain
15 for independent reasons. For example:

16 **Claim 25** recites that “the visual query definition is further displayed to
17 associate the query criteria based on proximate positions of the query criteria in
18 the visual query definition and without logic operators connected between the
19 query criteria”. As described above in response to the rejection of claim 24, Jain
20 teaches away from “without logic operators connected between the query criteria”
21 (as recited in claim 25) by showing that Boolean search criteria “AND” or “OR”
22 must be selected for input when formulating a bitmap image for comparison (*Jain*
23 Fig. 3).

Claim 32 recites that “a first shape of query criteria is displayed proximate a second shape of query criteria within the visual query definition such that the first shape has an AND query statement association with the second shape.” Jain does not show or disclose any such proximate display of shapes within a visual query definition, or that shapes have a query statement association based on a proximate display of the shapes, as described in claim 32. Further, the Office rejection of claim 32 does not address the recited features and the rejection should be withdrawn (*Office Action* p.20, ¶35).

Accordingly, claims 25 and 32 are allowable over Li for at least the reasons described above and the §102 rejection should be withdrawn.

Conclusion

Pending claims 1-27 and 29-58 are in condition for allowance and Applicant respectfully requests issuance of the subject application. If any issues remain that preclude issuance of the application, the Examiner is urged to contact the undersigned attorney before issuing a subsequent Action.

Respectfully Submitted,

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